

Interim BMP: Livestock Mortality Management Chesapeake Bay Program Phase 6.0 Modeling Tools

Agriculture Workgroup
April 21, 2016

BMP Name: Livestock Mortality Management

BMP Definition: This BMP represents the management and treatment of agricultural livestock mortality which is intended to reduce or eliminate the need for the land application of treated carcasses and their associated nutrients in the same area in which the mortality was generated. Mortality management can be accomplished by several treatment practices, including composting, gasification for nitrogen reductions, offsite disposal in permitted landfills, or on-farm freezing and removal for recycling to alternative uses.

BMP Treatment Categories:

Mortality Composting
Mortality Freezers
Mortality Gasification
Mortality Landfill

Measurement Names to be submitted: Tons (of carcass weight); Animal Type; County From (county in which mortality occurred and was treated); County To (county in which treated carcasses were transported for land application)

Model Simulation: States will submit the tons of carcass weight per animal type that was treated in a way consistent with the interim BMP definition. Each ton of reported mortality managed and treatment on an annual basis will be associated with default pounds of N and P in the Phase 6.0 Model for representative livestock types. The tons or carcass weight should be assigned by the states to permitted or non-permitted livestock production feeding areas, or a default distribution will be assigned.

The Agricultural Modeling Subcommittee (AMS) will define the pounds of N and P per ton of carcass based on available literature values. The subcommittee will also estimate the annual nutrient load attributable to livestock mortality based on available mortality data. The AMS recommendations will be reviewed by the Agriculture Workgroup (AgWG) for recommendation for Phase 6.0. The number of tons of carcass weight reported will be converted to pounds of N and P, and removed from the Phase 6.0 simulation so they are no longer available for runoff from the feeding operation area in the county in which the mortality occurred. Those nutrients will then be applied to cropland in the county to which the nutrients were transported, or removed from the modeling simulation if the treatment resulted in no land application. If the treatment resulted in no land application, states should report nothing for the County To measurement value.

The Chesapeake Bay Program Office will create an interim BMP for Phase 6.0 that will be listed as "DRAFT" in the NEIEN Appendix. This will allow states to use the interim BMP for planning purposes, and to report subsequent implementation information to NEIEN. However, the interim BMP will not receive credit through annual progress reporting until the availability of a partnership approved BMP Expert

Panel recommendation report. At that time, prior reported BMP implementation information post the Phase 6.0 model calibration period can receive nutrient reduction credits.

DRAFT

References Cited:

Malone, G., W. Saylor, K. Lomax, and J. Rosenberger,
1990. Acid Preservation and Utilization of Poultry
Carcasses Resulting from Mortality **Losses**. Research
Report to Delmarva Poultry Industry, Inc., Univ. of
Delaware, Research and Education Center, Georgetown,
DE.

Malone, G. W., 1992. Fermentation of mortality. Pages 49–55
in: Proceedings 1992 National Poultry Waste Management
Symposium. J. P. Blake, J. O. Donald, and P. H. Patterson,
ed. National Poultry Waste Management Symposium Committee.
Auburn University Printing Service, Auburn,
Alabama

**Dead Animal Nutrient Concentrations (AMS to
Complete Table for Phase 6)**

Animal Type	TN/lb dead weight	TP/lb dead weight	Lbs of dead weight/Animal
broilers	0.0283	0.0038	?
turkeys	?	?	?
pullets	?	?	?
layers	?	?	?
dairy	?	?	?
beef	?	?	?
other cattle	?	?	?
hogs for slaughter	?	?	?
hogs for breeding	?	?	?
sheep and lambs	?	?	?
horses	?	?	?
goats	?	?	?